DOCUMENT RESUME

ED 283 479 HE 020 467

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TITLE Locus of Control and Values of Adult Learners in Schools of Business, Dentistry, and Education.
PUB DATE Feb 87
NOTE 22p.; Paper presented at the Annual Meeting of the Eastern Educational Research Association (Boston, MA, February 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Age Differences; *Business Administration Education; *Dental Students; Departments; *Education Majors; *Graduate Students; Higher Education; *Locus of Control; Majors (Students); Sex Differences; *Values

ABSTRACT

The locus of control orientation and value priorities of graduate students in business, dentistry, and education were studied, along with the relationship between these variables. Students in the study were attending Virginia Commonwealth University during the 1983-86 academic years and ranged in age from 18 to over 40 years old. There were 212 business graduate students, 164 dentistry students, and 255 graduate students in education. Rotter's Internal-External Locus of Control Scale was administered, along with Rokeach's Value Survey, and a demographic survey. Results indicated that older students were more internally oriented than younger students and that males were more internally oriented than females across all three schools. The terminal and instrumental values given highest priority by students in all three schools were almost identical. There were several significant age and sex differences on value priorities within each school as well. Significant school effects indicated that dental students gave less priority to the value "national security" than did business or education students, whereas business students gave higher priority to "courageous." (Author/SW)

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Locus of Control and Values of Adult Learners in Schools of Business, Dentistry and Education

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HE 020 467

Paper presented at the annual meeting of the Eastern Educational Research Association, Boston, February, 1987.

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ABSTRACT

The purpose of this study was to describe the locus of control orientation and value priorities of graduate students in Schools of Business, Dentistry and Education as well as the relationship between these variables. Results indicated that older students were more internally oriented than younger students and that males were more internally oriented than females across all three schools. The terminal and instrumental values given highest priority by students in all three schools were almost identical. There were several significant age and sex differences on value priorities within each school as well. Significant school effects indicated that Dental students gave less priority to the value "National Security" than did Business or Education students whereas Business students gave higher priority to "Courageous." Partial correlations of terminal and instrumental value rankings with locus of control scores indicated the values related to an internal locus of control and those related to an external locus of control for each school.

The differences that adult learners bring with them to higher education such as age, sex, self-reliance and values are related in some way to their learning experiences. The literature on adult development and learning suggests that as age increases there is a change in the perception of one's autonomy as well as values (Levinson, 1978; Gould, 1978; Knoop, 1981; and Linder, et al., 1985, 1986).

Social learning theory (Rotter, 1966, 1975; Phares, 1976; Lefcourt, 1982, 1983) attempts to describe and explain a person's sense of control or lack of control over their environment. The locus of control (LOC) construct stresses the idea that an individual's behavior is determined in part by their level of expectancy and reinforcement value. An internal LOC refers to the perception that the occurrence of reinforcements are contingent upon one's own ability and/or effort while an external LOC refers to the perception that fate, luck, or powerful others are in control.

The research on values (Rokeach, 1973) suggests that there are developmental patterns in values as people age. Rokeach (1979) described two kinds of values which he named Terminal and Instrumental. Terminal values refer to goals that are worth striving toward such as "Freedom" and "Equality" while Instrumental values refer to desirable modes of behavior that help to attain valued outcomes such as "Honesty" and "Responsibility."

This study is the third in a series of systematic

investigations that describe the relationships between age, sex, LOC and values of adult learners who use higher education for mid-career professional development, career change or re-entry into the work force.

The following research questions guided this study:

1. What are the LOC orientations of graduate students in Schools of Business, Dentistry and Education and do older learners have a more internal orientation than younger learners?
2. Do males and females display different LOC orientations ?
3. What are the value orientations of graduate students in these schools and are there age, sex and school differences in value priorities?
4. Is there a relationship between age, sex, LOC and values of graduate students in these schools?

METHOD

Students were enrolled in business, dentistry, and education programs at Virginia Commonwealth University in Richmond during the 1983-86 academic years. Subjects ranged in age from 18 years to over 40. There were 212 graduate students in the School of Business sample, 164 students in the School of Dentistry, and 255 graduate students in the School of Education.

Rotter's (1966) Internal-External Locus of Control Scale which consisted of 23 question pairs within a forced-choice format plus six filler questions was used. The

I-E Scale has been judged appropriate for use with college educated adult subjects (Lefcourt, 1981).

Rokeach's (1973) Value Survey was the second instrument used and consisted of 18 alphabetically listed terminal and 18 alphabetically listed instrumental values on separate pages. Subjects rank order each list of values according to the relative importance of each value to themselves.

A three part survey comprising demographic data plus the two instruments were given to instructors to distribute to their classes. Part I requested information regarding the subject's age, sex, marital status, work and major. Part II consisted of Rotter's I-E Scale and Part III included Rokeach's Value Survey (Form D). A 54% and 50% return rate was obtained from the Schools of Business and Education, respectively. A 71% return rate was obtained from first and second year dental students. Additional data were gathered from third and fourth year dental students as well as fifth year dentists who were seeking specialization.

RESULTS

Locus of control (LOC) mean scores for the Schools of Business, Dentistry and Education by age and sex are presented in Table 1.

Insert Table 1 about here

The three-way analysis of variance indicated that older subjects were more internally oriented than younger students

across sex and schools. In most studies a mean LOC score below 8.5 is considered a relatively internal orientation on the I-E Scale that ranges from a score of 0 to 23 (Lefcourt, 1982). The data in Table 1 also indicated that males were significantly more internally oriented than females across all ages and schools. There were no significant school effects nor interactions on the LOC measure.

The mean ranks for Terminal values and significant effects at or below the .05 level from the three-way analysis of variance for the Schools of Business, Dentistry and Education are presented in Table 2.

Insert Table 2 about here

The most important Terminal values in all three schools were "Self-Respect," "Happiness," "Freedom" and "Family Security." The only significant school effect was obtained for the value "National Security." Dental students ranked this value as relatively less important to them when compared to Business and Education students. There was a significant age and sex effect for the value "Wisdom." The oldest students (over 39) in all three schools ranked this value as relatively more important to them when compared to younger students. Males in all three schools ranked "Wisdom" as more important to them when compared to females. There was also a significant sex effect for the value

"True Friendship." Males gave this value higher priority as compared to females.

Table 3 displays the mean ranks for Instrumental values and significant effects at or below the .05 level from the three-way analysis of variance.

Insert Table 3 about here

The values given the highest priority in all three schools were "Honest," "Responsible," "Loving," "Capable" and "Independent." There was a significant age effect for the value "Capable." Older students of both sexes and across all schools ranked this value as relatively more important to them when compared to younger students. Significant age and sex effects were obtained for the value "Loving." Both younger students and females gave higher priority to this value than did older students and males. The only significant school effect was obtained for the value "Courageous." Business students ranked this value as relatively more important to them than did Dentistry or Education people.

Age and sex differences for Terminal and Instrumental values as determined by two-way analysis of variance within Schools of Business and Education were reported by Linder et al. (1986). Results from the two-way analysis of variance for the School of Dentistry indicated significant age effects at or below the .05 level for the following terminal values:

"An Exciting Life," "Freedom," "Inner Harmony," "Social Recognition" and "Wisdom." Younger dental students gave higher priority to the value "Freedom" than did older students whereas older students ranked "Wisdom" as relatively more important than did younger students.

Results for the Instrumental values within the School of Dentistry indicated a significant sex effect for the value "Obedient." Male dental students gave this value higher priority than did female students.

Table 4 displays partial correlations of Terminal value rankings with LOC scores controlling for age and sex by school.

Insert Table 4 about here

A positive correlation indicated that the more internal one was the more one tended to subscribe to that value. Negative correlations indicated that the more external one was the more one subscribed to that value. Therefore, more internally oriented graduate students within the School of Business valued "Freedom," "A Sense of Accomplishment" and "A World of Peace." Externally oriented Business students valued "Family Security" and "Inner Harmony."

The values "Wisdom" and "A World of Peace" were positively correlated with an internal orientation in the School of Dentistry while "Happiness," "Pleasure" and "A Comfortable Life" were correlated with an external

orientation.

School of Education graduate students who were more internally oriented valued "Wisdom," "Inner Harmony" and "Equality." Externally oriented students valued "Pleasure," "Family Security" and "A Comfortable Life."

Table 5 displays partial correlations of Instrumental value rankings with LOC scores controlling for age and sex by school.

Insert Table 5 about here

The data indicated that there was a positive relationship between internally oriented Business students and the value "Independent." Externally oriented Business students valued "Forgiving."

School of Dentistry students who were more internally oriented valued "Self-Controlled" and "Courageous." Externally oriented students valued "Imaginative" and "Capable."

There were no significant positive relationships or trends observed between an internal LOC and Instrumental values for graduate students in the School of Education. There was a significant relationship between an external LOC and the value "Cheerful."

DISCUSSION

The research question regarding the LOC orientation of students in the present study and whether or not older

subjects displayed a more internal LOC can now be answered. Older students across all three schools exhibited a LOC that was significantly more internal than younger students' LOC. Knoop (1981) also reported that older subjects were more internally oriented. In the Schools of Business and Education the mean LOC scores decreased (became more internal) as age increased. This was also true in the School of Dentistry for most age groups except the oldest (35-39) whose LOC mean score was one of the highest reported in this study. It should be noted that this age group was comprised of only six subjects and the results are somewhat suspect. Indeed, the LOC mean score for the four males in this group was 11.50 and for the two females 7.00.

Male students across all three schools displayed a significantly more internal LOC than did females in this study. Previous analyses of LOC mean scores within the Schools of Business and Education also indicated that males were more internally oriented (Linder et al., 1986). Within the School of Dentistry, however, this result cannot be comfirmed. The general finding that males were more internally oriented than females was also reported by McNeill and Jacobs (1980).

The value priorities of graduate students in Schools of Business, Dentistry and Education were almost identical. When we examined the four top ranked Terminal values in these schools they were the same. The two Instrumental values given the highest priority in all three schools were

identical. What these results tell us is that for these students the attainment of self-respect, happiness, freedom and family security should be done in an honest and responsible way, that being capable, loving and ,at the same time ,independent is also valuable.

The finding that older students valued wisdom and capability more than the younger students should be helpful in understanding the differences in motivation among these students to learn what is being taught. At the same time, the fact that older students were more internally oriented and therefore perceived themselves to be more able and self-reliant should be helpful to faculty regarding how they teach. For example, it might be suggested that faculty match their teaching strategies to students' LOC orientations and provide for more independent study and individualized goals for internal students while offering a more structured and cooperative learning environment for external students. On the other hand, a deliberate mismatch between teaching strategies described above and students' LOC orientations would encourage students to gain missing skills provided by these experiences.

Finally, the finding that students' LOC orientation and values were related in the present study should be tentative. Many of the correlations were small even where the p values were significant at the .05 level. This basic research study needs to be replicated at other universities within their schools. In addition, faculty LOC orientation

and values need to be investigated as well. If, as Fuller et al. (1982) have pointed out, the value placed on organizational rewards and the expectancy of obtaining those rewards determine individual efficacy and motivation, then the quality of student learning rests in part on the quality of faculty teaching ability and effort.

REFERENCES

Fuller, B., Wood, K., Rapoport, T., and Dornbusch, S.M. (1982) The organizational context of individual efficacy. Review of Educational Research, 52, 7-30.

Gould, R.L. (1978) Transformations. New York: Simon and Schuster.

Knoop, R. (1981) Age and correlates of locus of control. The Journal of Psychology, 108, 103-106.

Lefcourt, H.M. (Ed.) (1981) Research with the locus of control construct (Vol. 1). New York: Academic Press.

Lefcourt, H.M. (1982) Locus of control: Current trends in theory and research. Hillsdale, New Jersey: Erlbaum.

Lefcourt, H.M. (Ed.) (1983) Research with the locus of control construct (Vol. 2). New York: Academic Press.

Levinson, D.J., Darrow, C.N., Klein, E.B., Levinson, M.H., and Mckee, B. (1978) The seasons of a man's life. New York: Alfred A. Knopf.

Linder, F., and Bauer, D. (1983) Perception of values among male and female undergraduate students. Perceptual and Motor Skills, 56, 59-63.

Linder, F., Londoner, C., and Bauer, D. (1985) Locus of control and value orientations of undergraduate and graduate students in a teacher education program, N.J.: Educational Testing Service (ERIC Document No., ED 259 030).

Linder, F., Londoner, C., and Bauer, D. (1986) Locus of control and value orientations of adult learners in postsecondary education, Wash., D.C.: G.W. University (ERIC Document No., ED 272 093).

McNeill, B.W. and Jacobs, M. (1980) Effects of locus of control, sex, and failure of causal attribution. Psychological Reports, 46, 1137-1138.

Phares, E.J. (1976) Locus of control in personality. Morristown, New Jersey: General Learning Press.

Rokeach, M. (1973) The nature of human values. New York: Free Press.

Rokeach, M. (1979) Understanding human values: Individual and societal. New York: Free Press.

Rotter, J.B. (1966) Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, (1, Whole No. 609).

Rotter, J.B. 1975) Some problems and misconceptions related to the contruct of internal versus external control of reinforcement. Journal of Consulting and Clinical Psychology, 43, 56-67.

Table 1. Mean Locus of Control Scores for Age and Sex, Separately for Each School.

	Business		Dentistry		Education		All Schools		
Age	N	Mean	N	Mean	N	Mean	N	Mean	
Under 23	14	9.71	22	9.50	1	12.00	37	9.65	
23-29	100	9.17	118	8.81	78	8.86	296	8.94	F = 2.73
30-34	51	8.78	18	8.33	56	8.39	125	8.55	df = 4,604
35-39	26	8.15	6	10.00	50	8.54	82	8.53	P = .0282
40+	21	5.86	0	---	70	8.01	91	7.52	
Sex	N	Mean	N	Mean	N	Mean	N	Mean	
Female	91	9.92	39	10.05	205	8.69	335	9.19	F = 6.70
Male	121	7.71	125	8.53	50	7.58	296	8.03	df = 1,604
									P = .0099
All	212	8.66	164	8.89	255	8.47	631	8.65	

Table 2. Mean Ranks for Values and Significant Effects from Analysis of Variance, Ignoring all Factors Except Age, Sex and School.

Terminal Value	Business (n = 212) Mean Rank	Rank of Value	Dentistry (n = 163) Mean Rank	Rank of Value	Education (n = 255) Mean Rank	Rank of Value	Significant Effect
A Comfortable Life	9.81	(10)	9.68	(10)	10.49	(11)	
An Exciting Life	10.87	(12)	10.86	(13)	10.49	(14)	
Sense of Accomplishment	7.28	(5)	8.25	(8)	8.22	(7)	
A World of Peace	11.14	(13)	10.73	(12)	9.11	(10)	
A World of Beauty	13.75	(18)	13.12	(16)	12.76	(16)	
Equality	12.55	(17)	11.96	(15)	10.69	(13)	
Family Security	6.71	(4)	6.05	(2)	5.92	(2)	
Freedom	6.69	(3)	7.08	(4)	6.99	(3)	S, L, AS
Happiness	6.53	(2)	5.69	(1)	7.25	(4)	A, AL
Inner Harmony	8.35	(9)	7.33	(5)	7.30	(5)	
Mature Love	7.95	(7)	8.00	(7)	8.67	(9)	
National Security	12.52	(16)	13.99	(18)	12.58	(15)	L
Pleasure	12.09	(14)	11.71	(14)	13.36	(17)	A
Salvation	10.72	(11)	9.93	(11)	10.67	(12)	
Self-Respect	5.68	(1)	6.32	(3)	5.17	(1)	S, AL
Social Recognition	12.35	(15)	13.55	(17)	13.49	(18)	
True Friendship	8.07	(8)	7.52	(6)	8.17	(6)	S
Wisdom	7.92	(6)	9.25	(9)	8.26	(8)	A, S

A=Age, S=Sex, L=School, AS=Age×Sex, AL=Age×School, SL=Sex×School

Table 3. Mean Ranks for Values and Significant Effects from Analysis of Variance, Ignoring all Factors Except Age, Sex and School.

Instrumental Value	Business (n = 212) Mean Rank	Rank of Value	Dentistry (n = 163) Mean Rank	Rank of Value	Education (n = 255) Mean Rank	Rank of Value	Significant Effect
Ambitious	7.50	(5)	7.93	(5)	9.85	(11)	A, SL
Broadminded	8.92	(8)	8.99	(7)	8.72	(8)	
Capable	7.27	(3)	8.37	(6)	7.84	(5)	A
Cheerful	10.01	(10)	10.18	(11)	10.53	(14)	A, AL
Clean	14.29	(17)	12.88	(17)	13.04	(17)	A
Courageous	9.33	(9)	10.71	(13)	10.28	(12)	L
Forgiving	10.12	(11)	9.36	(8)	9.48	(9)	
Helpful	10.16	(13)	9.39	(9)	8.64	(7)	
Honest	4.54	(1)	4.65	(1)	5.26	(1)	
Imaginative	10.80	(15)	12.29	(16)	11.49	(15)	
Independent	7.29	(4)	7.89	(4)	7.73	(4)	S, AL
Intellectual	8.75	(7)	10.20	(12)	8.59	(6)	SL
Logical	10.22	(14)	10.96	(14)	10.39	(13)	S, SL
Loving	7.74	(6)	6.43	(3)	6.76	(3)	A, S
Obedient	15.88	(18)	14.13	(18)	15.36	(18)	S, SL
Polite	12.40	(16)	11.00	(15)	11.54	(16)	
Responsible	5.63	(2)	6.19	(2)	5.69	(2)	
Self-Controlled	10.16	(12)	9.45	(10)	9.80	(10)	S

A=Age, S=Sex, L=School, AS=Age×Sex, AL=Age×School, SL=Sex×School

Table 4. Partial Correlations of Terminal Value Rankings with Locus of Control Scores of Graduate Students, Controlling for Age and Sex Separately for Each School.

School of Business			School of Dentistry			School of Education		
Value	Correlation	P-Value	Value	Correlation	P-Value	Value	Correlation	P-Value
Freedom	.118	.033	Wisdom	.140	.040	Wisdom	.083	.081
Sense of Accomplishment	.098	.076	A World of Peace	.108	.083	Inner Harmony	.081	.078
A World of Peace	.084	.096	National Security	.090	.170	Equality	.074	.089
National Security	.073	.186	Salvation	.090	.120	Self-Respect	.068	.159
Self-Respect	.070	.218	Family Security	.081	.197	Sense of Accomplishment	.068	.122
Equality	.069	.247	Self-Respect	.028	.659	Mature Love	.051	.295
An Exciting Life	.043	.431	Sense of Accomplishment	.014	.824	Freedom	.048	.320
Social Recognition	.038	.522	Freedom	.011	.863	A World of Peace	.048	.303
Wisdom	.000	.995	A World of Beauty	-.002	.971	Social Recognition	.037	.467
A World of Beauty	-.003	.954	Mature Love	-.037	.593	A World of Beauty	.020	.670
Salvation	-.009	.866	Social Recognition	-.042	.539	An Exciting Life	-.022	.618
Happiness	-.014	.797	Inner Harmony	-.052	.383	True Friendship	-.039	.429
A Comfortable Life	-.026	.630	Equality	-.054	.418	Salvation	-.045	.344
Mature Love	-.061	.287	An Exciting Life	-.058	.402	National Security	-.058	.213
True Friendship	-.080	.155	True Friendship	-.060	.354	Happiness	-.061	.164
Pleasure	-.085	.126	A Comfortable Life	-.117	.042	A Comfortable Life	-.099	.037
Inner Harmony	-.146	.010	Pleasure	-.142	.023	Family Security	-.103	.023
Family Security	-.154	.004	Happiness	-.184	.002	Pleasure	-.128	.006

Table 5. Partial Correlations of Instrumental Value Rankings with Locus of Control Scores of Graduate Students, Controlling for Age and Sex, Separately for Each School.

School of Business			School of Dentistry			School of Education		
Value	Correlation	P-Value	Value	Correlation	P-Value	Value	Correlation	P-Value
Independent	.097	.092	Self-Controlled	.117	.050	Logical	.068	.168
Ambitious	.079	.185	Courageous	.104	.099	Intellectual	.053	.268
Responsible	.076	.112	Logical	.085	.213	Imaginative	.044	.364
Capable	.057	.315	Intellectual	.046	.529	Courageous	.042	.354
Courageous	.035	.508	Honest	.045	.439	Ambitious	.042	.390
Obedient	.027	.590	Loving	.028	.675	Independent	.037	.459
Polite	.019	.732	Polite	.022	.724	Broadminded	.031	.507
Self-Controlled	.011	.842	Responsible	.017	.741	Honest	.031	.506
Helpful	.010	.868	Helpful	-.003	.961	Responsible	.029	.536
Cheerful	.006	.909	Obedient	-.012	.845	Capable	.018	.702
Logical	-.018	.759	Clean	-.015	.828	Helpful	-.015	.769
Broadminded	-.025	.653	Ambitious	-.016	.788	Loving	-.022	.659
Honest	-.028	.617	Forgiving	-.017	.792	Obedient	-.041	.361
Loving	-.039	.497	Broadminded	-.024	.734	Forgiving	-.048	.333
Intellectual	-.040	.467	Cheerful	-.032	.569	Polite	-.050	.218
Imaginative	-.055	.316	Independent	-.079	.212	Clean	-.054	.226
Clean	-.065	.239	Capable	-.143	.014	Self-Controlled	-.062	.194
Forgiving	-.099	.078	Imaginative	-.170	.004	Cheerful	-.151	.000